

**facsimile**  
**TRANSMITTAL**RECEIVED  
CENTRAL FAX CENTER  
AUG 25 2004

Date: August 25, 2004

No. of Pages: 11 (including this cover sheet)

Fax No.: (703) 872-9306

**PLEASE DELIVER THE FOLLOWING PAGES IMMEDIATELY TO:**

Name: Commissioner of Patents

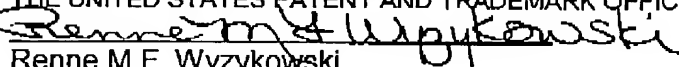
Art Unit: Mail Stop Missing Parts

Examiner:

Phone:

From: Daniel M. Cavanagh  
Reg No. 41,661Re: Application No. 10/721,910; Filed November 24, 2003  
Entitled METHOD OF OVERTONE SELECTION AND LEVEL CONTROL  
IN AN INTEGRATED CIRCUIT CMOS NEGATIVE RESISTANCE  
OSCILLATOR TO ACHIEVE LOW JITTER

File: 51592/DMC/V165

I HEREBY CERTIFY THAT THIS PAPER IS BEING FACSIMILE TRANSMITTED TO  
THE UNITED STATES PATENT AND TRADEMARK OFFICE ON August 25, 2004.  
Renne M.F. Wyzykowski\*Correspondence: Petition to Correct Filing Receipt and Filing Date  
Copy of Postcard (Exhibit A)  
Copy of Express Mail Receipt (Exhibit B)  
Copy of First Page of Application (Exhibit C)  
Copy of Transmittal Letter (Exhibit D)  
Copy of Filing Receipt

1079763.1

Christie, Parker & Hale, LLP  
350 West Colorado Boulevard  
Post Office Box 7068  
Pasadena, CA 91109-7068  
626-795-9900  
Fax: 626-577-8800**confidential**

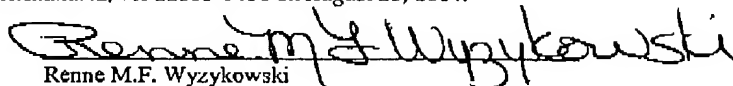
The information in this transmission is confidential and is intended only for the use of the individual or entity named above. If the reader of this message is not the intended recipient, you are hereby notified that any dissemination, distribution or copying of this communication is prohibited. If you have received this communication in error, please notify us immediately by telephone collect, and return the original message to us at the above address via U.S. mail. We will reimburse you for postage. Thank you.

RECEIVED  
CENTRAL EXAM CENTER  
AUG 25 2004

PATENT

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

I hereby certify that this correspondence is being facsimile transmitted (703) 872-9306 to the  
Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on August 25, 2004.

  
Renne M.F. Wyzykowski

Applicant : Raymond B. Patterson, et al. Confirmation No. 6287  
Application No. : 10/721,910  
Filed : November 24, 2003  
Title : METHOD OF OVERTONE SELECTION AND LEVEL CONTROL IN  
AN INTEGRATED CIRCUIT CMOS NEGATIVE RESISTANCE  
OSCILLATOR TO ACHIEVE LOW JITTER  
Grp./Div. : 2816  
Examiner : Not Assigned  
Docket No. : 51592/DMC/V165  
Customer No. : 23363

## PETITION TO CORRECT FILING RECEIPT AND FILING DATE

Mail Stop Missing Parts  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Post Office Box 7068  
Pasadena, CA 91109-7068  
August 25, 2004

Applicant has now become aware that the filing receipt for the application indicates an incorrect filing date and respectfully petitions to correct the filing date for the above-identified application. This application was filed by Express Mail on November 24, 2003. As evidence of the correct filing date, Applicant submits herewith a copy of the postcard (Exhibit A), a copy of the Express Mail Receipt (which has a Date In date of November 24, 2003) (Exhibit B), a copy of the first page of the application indicating Express Mail No. EV 327292141 US (Exhibit C), and a copy of the transmittal letter (Exhibit D).

Applicant Petitions to have the filing date corrected to be November 24, 2003, and requests that applicant be provided a corrected filing receipt indicating same. The Commissioner is hereby authorized to charge Deposit Account No. 03-1728 for any fees which may be required in this connection.


**Application No. 10/721,910**

A Corrected Filing Receipt indicating that this application has been assigned the filing date of November 24, 2003 is respectfully requested.

Respectfully submitted,

CHRISTIE, PARKER & HALE, LLP

By



Daniel M. Cavanagh  
Reg. No. 41,661  
626/795-9900

DMC/rmw

Enclosure: Acknowledgement Postcard  
Express Mail Receipt  
First Page of Application  
Transmittal Letter  
Filing Receipt

RMW IRV1079740.1-\*08/25/04 9:01 AM

FEE TRANSMITTAL  
UTILITY PATENT APPLICATION

DATE: November 24, 2003

Docket No. : 51592/DMC/V165  
Inventor(s) : Raymond B. Patterson III; Randy T. Heilman  
Title : METHOD OF OVERTONE SELECTION AND LEVEL  
CONTROL IN AN INTEGRATED CIRCUIT CMOS  
NEGATIVE RESISTANCE OSCILLATOR TO ACHIEVE  
LOW JITTER

Duplicate     

## FEE DETERMINATION

CLAIMS AS FILED					
	NUMBER FILED	NUMBER EXTRA	SMALL ENTITY RATE	LARGE ENTITY RATE	FEE
TOTAL CLAIMS	20 - 20	= 0	x \$9.00	0 x \$18.00	-0-
INDEPENDENT CLAIMS	3 - 3	= 0	x \$43.00	0 x \$86.00	-0-
MULTIPLE-DEPENDENT CLAIMS FEE			\$145.00	\$290.00	-0-
BASIC FEE			\$385.00	\$770.00	\$770
TOTAL FILING FEE					\$770
List Independent Claims: 1, 12, 17					

## METHOD OF PAYMENT

☒ No filing fee enclosed.☒ No Deposit Account Authorization.

Respectfully submitted,

CHRISTIE, PARKER &amp; HALE, LLP

By 

Daniel M. Cavanagh  
Reg. No. 41,661  
626/795-9900

DMC/rmw

RMW IRV1072081.1-11/24/03 2:57 PM



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
 United States Patent and Trademark Office  
 Address: COMMISSIONER FOR PATENTS  
 P.O. Box 1450  
 Alexandria, Virginia 22313-1450  
 www.uspto.gov

APPL NO.	FILING OR 371 (c) DATE	ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	DRAWINGS	TOT CLMS	IND CLMS
10/721,910	11/26/2003	2816	0.0	51592 MCV/165	8	20	3

MAR 02 2004

CONFIRMATION NO. 6287

CHRISTIE, PARKER & HALE, LLP  
 P.O. BOX 7068  
 PASADENA, CA 91109-7068

Christie, Parker &amp; Hale, LLP

## FILING RECEIPT



\*OC000000011984659\*

Date Mailed: 02/27/2004

Receipt is acknowledged of this regular Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Filing Receipt Corrections, facsimile number 703-746-9195. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

## Applicant(s)

Raymond B. Patterson III, Melbourne, FL;  
 Randy T. Heilman, Palm Bay, FL;

V165:  
 51592  
 CASE # ACTION  
 REMINDER DUE DATE  
 DEADLINE

## Domestic Priority data as claimed by applicant

This application is a CON of 10/346,557 01/16/2003 ABN  
 which is a CON of 10/163,860 06/05/2002 ABN  
 which claims benefit of 60/296,321 06/05/2001

## Foreign Applications

If Required, Foreign Filing License Granted: 02/26/2004

Projected Publication Date: To Be Determined - pending completion of Missing Parts

Non-Publication Request: No

Early Publication Request: No

## Title

Method of overtone selection and level control in an integrated circuit CMOS negative resistance oscillator to achieve low jitter

**Preliminary Class**

327

---

**LICENSE FOR FOREIGN FILING UNDER  
Title 35, United States Code, Section 184  
Title 37, Code of Federal Regulations, 5.11 & 5.15**

**GRANTED**

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Office of Export Administration, Department of Commerce (15 CFR 370.10 (j)); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

**NOT GRANTED**

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

## IN THE U.S. PATENT AND TRADEMARK OFFICE

## APPLICATION

Title: **Method of Overtone Selection and Level Control in an Integrated Circuit CMOS**Client ID **NEW V165**

Negative Resistance Oscillator to Achieve Low Jitter

Case No **51592**Priority Claimed? **YES**Atty/Sec **DRG:TMW**

Assignment Enclosed (List Assignee)

Date Mailed **Nov. 24, 2003**  
Express Mail No. **EV3272921410S**Check(s) **NONE**Checked by: **TMW**

Transmittal Letter(s)

Patent Mark:  
**3 pgs in dup.**

Application (No. of Pages)

**27 pages**

Declaration &amp; Pwr of Atty

**COPY**

Included

Informal/Formal Drawings

**8 sheets**

3 Specimens/Photos/Facsimiles

**N/A**

Small Entity Declaration

**N/A**

Info Disc Stmt/PTO-1449

**N/A**

Petition Extension of Time

**N/A****FOR Preliminary Amendment (3 pgs.)**

OTHER Copy of Petition for

Extension of Time in Parent Case **49577**

Applicant Use Only

PATENT: **ORD** **PRO** **PCT** **QAP** **CPP** **DIV** **CON** **CIP** **REI** **REX OF** **DOCKET** **49577**MARK: **TM** **SM** **TM/SM** **COLL** **CERT** **ITU** **44d** **44e** **DIV**DOCKET: **Y/N** **Standard** **Y** **FOR REV** **Y** **FOR DEADLINE** **Parent Case** **FOR REV/DEADLINE**

PLEASE RETURN THIS POSTCARD

SERIAL NUMBER/FILING DATE

**22388 U.S. PTO**  
**10/721910**  
**112603**

Exhibit A



EV 327292141 US



UNITED STATES POSTAL SERVICE®

Customer Copy  
Label T-1F June 2002

Post Office To Addressee

ORIGIN (POSTAL USE ONLY)				DELIVERY (POSTAL USE ONLY)			
PO ZIP Code 92799	Day of Delivery <input checked="" type="checkbox"/> First <input checked="" type="checkbox"/> Second	Flat Rate Envelope 1365		Delivery Attempt Mo. Day	Time <input type="checkbox"/> AM <input type="checkbox"/> PM	Employee	
Date In Mo. Day Year 11 24 03	<input checked="" type="checkbox"/> 12 Noon <input type="checkbox"/> 3 PM	Postage \$		Delivery Attempt Mo. Day	Time <input type="checkbox"/> AM <input type="checkbox"/> PM	Employee Signature	
Time In 2046	Military <input type="checkbox"/> AM <input type="checkbox"/> PM	Return Receipt Fee		Delivery Date Mo. Day	Time <input type="checkbox"/> AM <input type="checkbox"/> PM	Employee Signature	
Weight 11 lbs.	Int'l Alpha Country Code	COD Fee	Insurance Fee	<input type="checkbox"/> <b>WALVER OF SIGNATURE</b> (If you are a business, you may request a waiver of signature. If you are an individual, you may request a waiver of signature if you are the addressee or if you are the delivery employee. If you are the addressee, you must sign the label in your own handwriting and I authorize that delivery employee's signature is substituted for yours.) <input type="checkbox"/> <b>NO DELIVERY</b> <input type="checkbox"/> Weekend <input type="checkbox"/> Holiday			
No Delivery <input type="checkbox"/> Weekend <input type="checkbox"/> Holiday	Acceptance Mark Initials ADS	Total Postage & Fees \$ 13.65					
<b>CUSTOMER USE ONLY</b> <b>METHOD OF PAYMENT:</b> Express Mail Corporate Acct. No.				Federal Agency Acct. No. or Postal Service Acct. No.			
<b>FROM: (PLEASE PRINT)</b> CHRISTIE PARKER - HALL 3301 JAMBUKEE RD STE 6000 NORTH TOWN NEWPORT BEACH CA 92660-2960 VI65:51592:DNC:TEW				<b>TO: (PLEASE PRINT)</b> HALL OF PATENT APPLICATION COMMISSIONER FOR PATENTS PG BOX 1450 ALEXANDRIA VA 22310-1450			

PRESS HARD.  
You are making 3 copies.

FOR PICKUP OR TRACKING CALL 1-800-222-1811 www.usps.com





45427/JFO/V165

METHOD OF OVERTONE SELECTION AND LEVEL CONTROL  
IN AN INTEGRATED CIRCUIT CMOS NEGATIVE RESISTANCE  
OSCILLATOR TO ACHIEVE LOW JITTER

5 CROSS-REFERENCE TO RELATED APPLICATIONS

This application claims the benefit of U.S. Provisional Application, No. 60/296,321, filed June 5, 2001, the disclosure of which is incorporated by reference.

BACKGROUND

10 The present invention generally relates to generating clock pulses and in particular to generating a stable high-speed clock pulse train by employing a negative resistance oscillator operating at an overtone frequency of a resonator.

Applications such as communications, video processing, data  
15 acquisition and recovery, and high-bandwidth test systems require stable high frequency clocks to meet specific performance demands and provide periodic and accurately spaced signals. Most clocks include an electronic device, e.g., an oscillator, to generate an accurate oscillating signal. This  
20 signal oscillation is based on a periodic event that, under the control of a resonator, repeats at a natural and substantially constant rate, i.e., a fundamental or resonance frequency.

Stability is an inherent property that determines how well an oscillator can produce the same frequency over a given time  
25 interval. The more stable the oscillator, the more accurately the fundamental frequency is produced, and the less variations there will be in signal characteristics. Additionally, quality factor, or Q, is another inherent oscillator quality that influences stability. In general, oscillators having a high  
30 quality factor tend to be more stable, experience fewer signal

Express Mail No. EV327292141US

---

**UTILITY PATENT APPLICATION TRANSMITTAL**  
(Only for new nonprovisional applications under 37 CFR 1.53(b))

---

Docket No. : 51592/DMC/V165  
Inventor(s) : Raymond B. Patterson III; Randy T. Heilman  
Title : METHOD OF OVERTONE SELECTION AND LEVEL CONTROL  
IN AN INTEGRATED CIRCUIT CMOS NEGATIVE RESISTANCE  
OSCILLATOR TO ACHIEVE LOW JITTER  
Express Mail Label No. : EV 327292141 US

---

ADDRESS TO: Mail Stop Patent Application  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

November 24, 2003

---

1. ☒ **FEE TRANSMITTAL FORM** *(Submit an original, and a duplicate for fee processing).*

2. **IF A CONTINUING APPLICATION**

☒ This application is a continuation of patent application No. 10/346,557, filed January 16, 2003 which is a continuation of patent application No. 10/163,860, filed June 5, 2002.

Prior application information: Examiner Not Assigned; Group Art Unit: 2817.

☒ This application claims the benefit of Provisional Application No. 60/296,321, filed June 5, 2001 pursuant to 35 U.S.C. §119(e) and 37 CFR §1.78(a)(4).

3. **APPLICATION COMPRISED OF**

**Specification**

27 Specification, claims and Abstract (total pages)

**Drawings**

8 Sheets of formal drawing(s) (FIGS. 1 to 8)

**Declaration and Power of Attorney**

       Newly executed

       Unexecuted declaration

☒ Copy from a prior application (37 CFR 1.63(d))(for continuation and divisional)  
(UNEXECUTED)

4.        **Microfiche Computer Program** *(Appendix)*

5.        **Nucleotide and/or Amino Acid Sequence Submission** *(if applicable, all necessary)*

       Computer Readable Copy

       Paper Copy (identical to computer copy)

       Statement verifying identity of above copies

---

**UTILITY PATENT APPLICATION TRANSMITTAL****(Only for new nonprovisional applications under 37 CFR 1.53(b))****Docket No.: 51592/DMC/V165**

---

**6. APPLICANT(S) STATUS UNDER 37 CFR §1.27**

         Applicant(s) and any others associated with it/them under §1.27(a) are a SMALL ENTITY


**7. ALSO ENCLOSED ARE**

- Request and Certificate under 35 U.S.C. §122(b)(2)(B)(i) Request for Non-Publication
- X   Preliminary Amendment
- X     Includes "Cross-Reference to Related Applications"
- X   A copy of the Petition for Extension of Time for the parent application is enclosed
- An Assignment of the invention with the Recordation Cover Sheet and the recordation fee are enclosed
- This application is owned by pursuant to an Assignment recorded at Reel , Frame
- Information Disclosure Statement (IDS)/PTO/SB/08A/B
- Copies of IDS Citations
- Certified copy of Priority Document(s) (if foreign priority is claimed)
- English Translation Document (if applicable)
- X   Return Receipt Postcard (MPEP 503) (should be specifically itemized).
- Other:

**8. CORRESPONDENCE ADDRESS****CHRISTIE, PARKER & HALE, LLP, P.O. BOX 7068, PASADENA, CA 91109-7068****Customer Number: 23363**

Respectfully submitted,

CHRISTIE, PARKER &amp; HALE, LLP

By 

Daniel M. Cavanagh

Reg. No. 41,661

626/795-9900

**This Page is Inserted by IFW Indexing and Scanning  
Operations and is not part of the Official Record**

**BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ **BLACK BORDERS**
- ☐ **IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- ☐ **FADED TEXT OR DRAWING**
- ☐ **BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- ☐ **SKEWED/SLANTED IMAGES**
- ☐ **COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- ☐ **GRAY SCALE DOCUMENTS**
- ☐ **LINES OR MARKS ON ORIGINAL DOCUMENT**
- ☐ **REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- ☐ **OTHER:** \_\_\_\_\_

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.**